Amendment to the Claims:

This listing of claims will replace all prior versions, and listing of claims in the application.

Listing of Claims:

1.   (Currently Amended) A receiver for receiving a dual code spread spectrum signal, comprising:

a plurality of diversity antennas,

an adaptive forward equal gain combiner having a plurality of branches, each branch being coupled to a respective one of said diversity antennas, each diversity antenna receiving a respective carrier signal,

        wherein said combiner comprises:

            means for selecting a signal in one of said branches as a reference signal,

            means for co-phasing the carrier signals in each of the respective branches with the reference signal,

means for splitting an output from the combiner into two output channels,

means for demodulating the signals in the output channels,

means for correlating the signals in each of the output channels with respective ones of the dual spreading codes and means for recovering data from the correlated signals.

2.   (Cancelled)

3.   (Cancelled)

4.   (Currently Amended) A receiver as claimed in claim ~~2~~1, ~~characterised in that~~ wherein each branch comprises:

_____ a multiplier having a first input for a signal from its antenna and a second input for a phase adjusted local oscillator signal and an output for a difference signal,

_____a filter for removing high order harmonics from the difference signal,

_____a weighting controller having means for producing a weighting signal which is applied to a first phase shifter for adjusting the phase of the local oscillator signal and a weighting factor related to the selected reference signal,

_____a second phase shifter having an input for a signal derived from the antenna, said second phase shifter having an input for the weighting factor whereby the input signal is co-phased with the selected reference signal, and

_____a signal combiner for combining the selected reference and co-phased signals from the respective branches.

5.   (Currently Amended)   A receiver as claimed in claim ~~4~~1, ~~characterisd in that~~ wherein ~~the~~ a centralized weighting controller ~~is common to said branches~~comprises for each of said branches:

_____a multiplier having a first input for a signal from its antenna and a second input for a phase adjusted local oscillator signal and an output for a difference signal,

_____a filter for removing high order harmonics from the difference signal,

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a weighting controller having means for producing a weighting signal which is applied to a first phase shifter for adjusting the phase of the local oscillator signal and a weighting factor related to the selected reference signal,

a second phase shifter having an input for a signal derived from the antenna, said second phase shifter having an input for the weighting factor whereby the input signal is co-phased with the selected reference signal, and

a signal combiner for combining the selected reference and co-phased signals from the respective branches.

6.   (Currently Amended)   A receiver as claimed in claim 5, ~~characterised in that~~ wherein the weighting controller comprises a controller for receiving digitized filtered outputs of the respective multipliers, a first memory means storing the weighting signals coupled to the controller, a second memory means storing the weighting factors coupled to the controller, the controller having an outputs coupled respectively to the first and second phase shifters.

7.   (Currently Amended)   A communication system comprising first and second transceivers, one of the first and second transceivers having a transmitting section for transmitting dual code spread spectrum signals, and the other of the first and second transceivers having a receiving section comprising antenna diversity means for receiving the signals propagated by said one of the first and second stations, the antenna diversity means comprising a plurality of branches and means for co-phasing the signals in all but one of the branches with the signal in the one of the branches, means for combining the

co-phased signals, wherein said combining means further comprises means for selecting a signal in one of said branches as a reference signal, and means for co-phasing the carrier signals in each of the respective branches with the reference signal, said receiver section further combining means for respectively correlating the combined signals with first and second PN spreading codes used for spreading data streams in said transmitting section and means for recovering data from the correlated signals.

8.   (Currently Amended) A system as claimed in claim 7, ~~characterised in that~~ wherein means are coupled to the output of the signal combining means for splitting the combined signal into two in-phase channels, each of the channels including means for frequency down-converting the signals in its channel and the correlating means for dispreading the frequency down converted signals using a respective one of the first and second PN spreading codes, and in that the means for recovering data comprise means coupled to the correlating means in each channel for comparing the despread signals to determine the data output.

9.   (New) A receiver for receiving a dual code spread spectrum signal, comprising:

a plurality of diversity antennas,

an adaptive forward equal gain combiner having a plurality of branches, each branch being coupled to a respective one of said diversity antennas,

wherein each of said branches comprises:

frequency down conversion means and phase compensating means, in that a local oscillator is coupled to each of said compensating means, in that each of said phase compensating means comprises:

means for adjusting the phase of the local oscillator to minimize the phase difference between the adjusted phase of the local oscillator frequency and the phase of the signal received by the respective branch, and

means for selecting the branch having a minimum phase deviation with respect to the local oscillator frequency and treating that signal as a reference signal

means for splitting an output from the combiner into two output channels,

means for demodulating the signals in the output channels,

means for correlating the signals in each of the output channels with respective ones of the dual spreading codes and means for recovering data from the correlated signals.